

3.2 State and Regional Energy Planning

Policy Description and Objective

Summary

Energy planning is, in its broadest sense, a strategic effort to develop energy-related goals and objectives and formulate related policies and programs. As the nexus for a variety of state concerns, energy planning can serve as an umbrella mechanism for simultaneously addressing energy, environmental, economic, and other issues. Energy planning can be undertaken at both a state and regional level.

Many states have used their energy plans to support the development and use of cost-effective clean energy to help address multiple challenges including energy supply and reliability (including concerns with availability, independence, and security), energy prices, air quality and public health, and job development.

Clean energy planning (as one aspect of energy planning) has taken place in several contexts. It has been part of a broad, multi-faceted strategy that incorporates clean energy as one element (along with conventional sources and end uses), as in the New York State Energy Plan. It has been incorporated into more targeted efforts as in the California Energy Action Plan, which was developed in the wake of an electricity and natural gas crisis and sought to prioritize cost-effective, environmentally sound options. States have approached clean energy planning as an exclusive focal point, such as in the Illinois Sustainable Energy Plan. Other planning approaches have included variations of these, including government-focused lead by example strategies.

Energy planning can serve as a platform to promote or adopt significant policy initiatives including statewide clean energy goals, such as a renewable portfolio standard (RPS) or energy efficiency requirement, green power purchase levels for the state, or greenhouse gas reduction goals. The 2002 New

Energy planning at the state or regional level is an effective means for ensuring that clean energy is considered and used as an energy resource to help states address their multiple energy and nonenergy challenges.

York State Energy Plan, for example, included a renewable energy goal that helped spur the development of New York's RPS and a greenhouse gas emission reduction goal that set the stage for the governor to solicit support for a regional greenhouse gas initiative across the Northeast.

Energy plans are usually developed by one or more state agencies, typically led by the state energy office. These efforts may be at the direct behest of the governor or other top official or the state legislature. Frequently, public and private sector stakeholders, such as electricity and gas utilities, environmental organizations, equipment manufacturers, and others, provide input to the plan. Implementation likewise involves a variety of agencies and stakeholders, and possibly calls for specific legislative or executive level action.

While some states require energy plans, the level of activity varies as does the scope and scale of efforts. Similarly, the inclusion of clean energy sources varies depending upon the state's circumstances. However, with all regions facing significant costs for new resources, along with heightened reliability, security, and environmental concerns, there has been increased interest in energy planning that includes consideration of the energy, economic, and environmental benefits of clean energy.

This section describes how states and regions have included clean energy in their energy planning efforts, discusses the role of various participants in the process, describes the interaction with federal and state policies or programs, and lays out several sets of best practice measures with respect to plan development, implementation, and evaluation. Chapter 2 of this Guide, *Developing a Clean Energy-Environment Action Plan*, provides additional detail on best practices for the development step, including

Examples of Clean Energy Goals from State Energy Planning Documents

Below are examples of specific, quantitative clean energy goals (including recommendations and proposed strategies) that states have included in their state energy plans or related documents:^a

- Improve new and remodeled building efficiency by 5% and accelerate the state's RPS by adding a net average of 600 MW of new renewable generation sources annually (*California, Energy Action Plan, 2003*).
- By 2006, 2% of electricity sales generated by renewable energy; increasing annually by 1% until 2012. Reduce electricity consumption by 10% of projected annual load growth by years 2006 to 2008, rising to 25% in years 2015 to 2017 (*Illinois, Sustainable Energy*).
- Increase electricity production of solar energy in New Jersey to at least 120,000 MWh per year by 2008 (*New Jersey, Clean Energy Program Annual Report, 2003*).
- Reduce primary energy use per unit of gross state product by 25% below 1990 levels by 2010; increase renewable energy use as a percentage of primary energy use by 50% from 2002 levels to 15% by 2020; reduce greenhouse gas emissions by 5% below 1990 levels by 2010 and 10% below 1990 by 2020 (*New York, State Energy Plan, 2002*).
- State agencies and universities reduce energy consumption in existing state building to save 20% by 2008 (*North Carolina, State Energy Plan, 2003*).
- 25% of state government's total electricity needs met by new renewable energy sources by 2010 and 100% by 2025 (*Oregon, Renewable Energy Action Plan, 2005*).
- Establish a new standard for renewable energy use in the state, averaging 10% statewide by 2015 (*Wisconsin, Report to the Governor's Task Force on Energy Efficiency and Renewables, 2004*).

^a Note that these goals are not necessarily the only ones included in a particular state plan and that additional action is generally required to implement a goal.

specifics on analytical tools, and lays out a number of action steps for states. Chapters 3 through 6 contain descriptions of 16 clean energy policies, programs, and strategies that states are pursuing and may be included in a clean energy plan. In keeping with the scope of the *Guide to Action*, this section

focuses on the electricity and natural gas sectors. The role of transportation in energy planning is an important one, however, and one that at least several states are integrating into their processes.

Objective

State and regional energy planning can further multiply state goals and leverage tools, resources, and policy opportunities from many agencies/states. States have advanced clean energy through their planning efforts by: (1) identifying and promoting a package of cost-effective options to meet energy, environment, and economic goals, (2) recognizing and assessing a full range of short- and long-term benefits from energy efficiency and renewables, (3) engaging multiple agencies and stakeholders in the state planning process and implementation, and (4) helping state agencies from different states within a region coordinate their efforts to better achieve complementary goals.

Benefits

Energy plans that incorporate environmental considerations and related cost-effective clean energy options including energy efficiency, renewable energy, and combined heat and power (CHP) have helped lay the groundwork for the efficient use of energy and state resources and helped to achieve a broad set of energy, economic, and environmental policy goals, including:

- Providing a cost-effective response to projected load growth, possibly avoiding the need for new power plants and infrastructure.
- Helping to meet challenges that load growth places on an aging system, and/or alleviating congestion and related concerns with system stability and reliability.
- Increasing energy supply diversity and security with greater reliance on domestic, regional, or in-state resources.
- Reducing energy prices and price volatility.
- Reducing the environmental footprint of energy use.

In addition, integrated energy planning efforts have yielded many policymaking benefits, including:

- Providing a framework to coordinate energy efficiency and renewable energy initiatives among state agencies and across states within a region.
- Reducing the time and costs associated with meeting existing and future environmental requirements through more efficient deployment of agency resources and efforts and adoption of least-cost and least time-intensive measures.
- Developing a climate in the state favorable to investment, innovation, and economic development of energy efficiency and renewables.
- Providing technical insights and organizational relationships that are valuable in a crisis or unexpected situation where quick decisionmaking is required.
- Conveying a sense of coherence and joint purpose to the public and other stakeholders.

State Energy Planning

States are using a variety of approaches to energy planning, ranging from establishing broad policy agendas to focusing exclusively on clean energy resources. Some states have also developed plans for how they can lead by example through government-focused initiatives. States may also look specifically at the electricity sector in their development of a clean energy plan. In addition, under the State Energy Program directed by the U.S. Department of Energy (DOE), state energy offices develop plans for how to invest support received through an annual federal funding appropriation to help promote energy efficiency and renewable energy (see *Interaction with Federal Policies* on page 3-35).

The following approaches can be adapted and combined, with the appropriate combination based on a state's priorities and resource availability:

- *Clean Energy Within a Comprehensive State Energy Plan.* Several states have developed a comprehensive energy plan that includes specific policy goals, action items, and implementation steps to increase

the use of energy efficiency and renewable energy sources as one of several complementary sources. Examples include New York's State Energy Plan, Connecticut's Energy Plan, and California's Integrated Energy Policy Report and Energy Action Plan (EAP). Comprehensive energy plans have established specific targets for clean resources and identified strategies (e.g., a renewable energy and/or energy efficiency portfolio standard [EEPS]) for implementing policies and programs by a variety of state agencies. California has used its plan to prioritize clean energy as a way to meet future load growth by establishing the following "loading order" for resources: (1) conservation and energy efficiency, (2) new renewable generation, and (3) clean fossil fuel-fired central generation (CERCDC 2003). The New York State Energy Plan includes goals for improving the combined contribution of energy efficiency and renewable energy in meeting the state's energy needs.

- *Energy Plan Focused on Clean Energy.* Some states have developed a targeted energy plan that emphasizes increasing penetration of renewable resources, boosting energy efficiency, and increasing demand response. Clean energy may also be included in plans that address related issues of natural gas dependency or climate change. Examples include Illinois' Sustainable Energy Plan, New Mexico's Clean Energy Plan, Pennsylvania's Energy Harvest, and Wisconsin's Report of the Governor's Task Force on Energy Efficiency and Renewables. The Illinois plan sets a renewables goal for 2006 that at least 2% of the electricity sold to customers would come from renewables, with an annual increase of 1% until 2012. For efficiency, the goal is to reduce electricity consumption by at least 10% of projected annual load growth between 2006 and 2008, increasing to a 25% reduction from 2015 to 2017.
- *Plan for Leading by Example.* Many states have developed energy plans designed to help the state lead by example in its own use of resources. These state initiatives can jump-start the market for renewables and provide drivers for efficiency technologies and services. The lead by example

approach can be incorporated into a broad energy plan or a targeted clean energy plan, or be pursued independently. Examples of measures that a state can pursue include: adopting a renewable energy goal for the electricity consumed by the state (e.g., its office buildings, vehicle fleets), setting efficiency thresholds for the purchase of energy consuming products or equipment, and improving energy efficiency to offset projected load growth. Connecticut, Virginia, Nevada, Oregon, South Dakota, and Vermont are among the states that use this approach. Oregon has decided to increase the energy efficiency of new or remodeled state buildings by 20% or better, and existing buildings are required to reduce energy consumption by 10% relative to 2000. (See Section 3.1, *Lead by Example*, for more information.)

- *Planning by Regulated Entities.* Given their significant role in energy supply and use, states can require that regulated electricity suppliers (i.e., electric utilities or electric distribution companies) develop electricity plans that are consistent with the state's policy objectives. This effort can be connected to a broader energy planning effort or a targeted clean energy initiative, or be pursued on its own. In states where utilities are vertically integrated (the traditional approach to regulation in which generation, transmission, and distribution are provided by one entity), this takes the form of Integrated Resource Planning (IRP) (e.g., California, Minnesota, Washington). In states where the regulation of the electricity industry has been restructured, this can take the form of including clean energy in portfolio management (e.g., New Jersey, Illinois). Utilities may also develop comprehensive energy efficiency investment plans as part of their demand-side management or other efforts. IRP and portfolio management are discussed in more detail in Section 6.1, *Portfolio Management Strategies*. Utility funding for energy efficiency is discussed in Section 4.2, *Public Benefits Funds for Energy Efficiency*.

Regional Energy Planning

Regional planning typically occurs in two separate, but related, forums. Government or quasi-government entities, such as governors' associations, may develop a coordinated approach for sharing information and developing broad regional policy approaches. These planning approaches are not usually binding, with the exception of the Northwest Power Planning Council. In addition, power system operators engage in rigorous power system planning that focuses primarily on a reliable and adequate power supply for an electrical region. These regional planning approaches are described as follows.

- *Regional Plan for Policy Coordination.* In some regions, states are working together to create an energy plan that outlines shared policy goals. The Western Governors' Association (WGA) has established a Clean and Diversified Energy Advisory Council to help pursue the regional goals of 30,000 MW of clean energy by 2015 and increasing the efficiency of energy use by 20% by 2020. The New England governors have taken a coordinated approach to policy development in the areas of climate change, energy efficiency, and renewables through its New England Governors/Eastern Canadian Premiers Climate Change Action Plan, which includes the goal of increasing the amount of energy saved through conservation programs by 20% by 2025. The Coalition of Northeast Governors (CONEG) has established an Energy Working Group and is active in pursuing biomass and other renewable options.

Regional approaches have been pursued for a variety of reasons. Some of the motivation is the regional nature of power markets and the attempt to better align policy boundaries with those of the relevant independent system operator (ISO) or similar organization (see more in the "Clean Energy in Regional Power System Planning" bullet). In addition, many regions have a long history of working collectively to pursue public policy goals, and energy policy is a natural extension of this historic relationship. Regional efforts are also attractive for states that want to move forward with the support of neighboring states to create a

"level playing field" (e.g., with respect to prices) in their region. Regional approaches can also offer opportunities for economies of scale, for instance, under aggregated purchasing efforts.

- *A Federally Mandated Regional Energy Planning Process.* The Northwest Power and Conservation Council, created by Congress in 1980, develops and maintains a regional power plan to balance the Northwest's environment and energy needs. The council is explicitly charged with incorporating cost-effective measures in its plan according to the following priorities: (1) conservation, (2) renewable resources, (3) generating resources using waste heat or generating resources of high fuel conversion efficiency, and (4) all other resources (Pacific Northwest Electric Power Planning and Conservation Act 1980).

In addition, the Northwest Power and Conservation Council provides an example of how regional state committees can examine the role of clean energy as a resource. These examples are discussed in more detail under the *State and Regional Examples* section on page 3-38.

- *Clean Energy in Regional Power System Planning.* Regional power system operators conduct detailed ongoing planning efforts to ensure the reliable and efficient operation of the interconnected bulk electricity power systems. As such, their focus is narrower than a state energy plan that is undertaken by a government entity and reflects broader public policy goals. However, these plans increasingly attempt to consider how clean energy resources can be deployed to avoid the need for other grid resources such as new power lines. Plans are typically developed on an annual basis, with regular reviews throughout the year. The plans cover a long-term planning horizon of about 10 years. Many states participate in these regional planning processes and support consideration of energy efficiency and renewables as supply resources and as alternatives to transmission system expansion.

There have been some efforts to formalize state participation in regional power system planning processes. For example, states in the Midwest ISO

region have created a new Organization of Midwest ISO States (OMS) as a coordination vehicle for state utility commissions in their response to Midwest ISO's regional planning. OMS has a small staff and bylaws, and state commissions provide staff support. OMS is intended to coordinate the information needs and state responses to Midwest ISO regional transmission plans. This is one example of a Regional State Committee that the Federal Energy Regulatory Commission (FERC) has encouraged for state input into regional planning processes that could be used to foster clean energy planning.

Designing an Effective State or Regional Energy Plan

This section describes policy issues, approaches, and best practices for designing effective clean energy plans. The issues covered in this section are built on lessons learned from states' experiences in developing and implementing energy plans. First is a discussion of important procedural issues: determining the participants that need to be involved; assessing funding necessary to support the effort; setting the planning horizon covered by the plan and related analysis; and, determining the frequency for planning, reviews, and updates. Next, this section contains insights into interactions of energy planning with other state and federal policies.

Participants

States have found that participation by a wide variety of stakeholders results in the most effective energy planning processes. Broad participation across agencies, states, and relevant external stakeholders, facilitates information sharing, promotes the consideration of a broad range of options and related tools, and enables participants to understand how their efforts fit into the broader plan. In some states, the legislature has created a board or council that includes multiple agencies and sometimes legislators and/or other stakeholders (e.g., Connecticut Energy Advisory Board, North Carolina Energy Policy Council, New York Energy Planning Board). In other states,

the governor has formed a task force or council that includes state agencies, legislators, and sometimes a variety of external stakeholders (e.g., Delaware, Illinois, Iowa, Kansas, Kentucky, Oregon, Wisconsin). External stakeholders can play a role in developing the energy plan through meetings, public comment processes, and expert presentations. Many of the same state-level participants play similar roles in the development of regional energy plans.

- *Governor.* States have found that top-level commitment to clean energy policies and leadership on a coordinated approach is an important part of developing an effective energy policy and ensuring effective follow-through on implementing clean energy measures. The governor can establish priorities and policy objectives, and can ensure that appropriate agencies participate in the process. In recent years, governors have increasingly recognized the importance of energy planning and the link between energy, the environment, and the economy. For example, in their 2004 state of the state addresses, several governors recognized this linkage and proposed related programs or policies. A number of governors have created cabinet level task forces or similar bodies to study and/or implement clean energy policy goals (e.g., Delaware Energy Task Force, Iowa Energy Coordinating Council, Florida Energy 2020 Study Commission, New Mexico Solar Power Task Force, Oregon Renewable Energy Action Plan, West Virginia Energy Task Force, and Wisconsin Energy Efficiency and Renewables Task Force).
- *Legislature.* Legislatures have played a variety of roles. Many of the action items in an energy plan may require legislative approval and/or funding. In some states, the legislature has mandated an energy planning process. Such a mandate can help clarify clean energy priorities, ensure that appropriate agencies participate, and increase the likelihood that adequate resources are devoted to energy planning and associated implementation steps. Examples of legislative initiatives include the Connecticut Energy Advisory Board, the North Carolina Energy Policy Council, California Integrated Energy Policy Reports, and the New York State Energy Plan. In many instances, legislators
- serve on an energy board or council (e.g., Delaware and North Carolina).
- *State Agencies.* Agencies provide detailed knowledge and experience and dedicated resources. They are often looked to by the governor and/or legislature to define broad policy objectives, inform development of targets, develop policies and programs, identify feasible implementation steps, and develop action items. They are also key players in implementing specific programs and in reviewing plan implementation. Increasingly, states are looking to include the broadest array of agencies possible to enhance leveraging opportunities and harmonize efforts. States have included agencies covering a range of interests (e.g., education, energy, public utilities, environmental protection, transportation, housing, agriculture, economic development, consumer protection, human rights, government purchasing, administrative services) in the planning process. States may also provide their perspective as large end users.
- *Universities.* Frequently, universities play an important role in developing and implementing an energy plan. For instance, faculty might be able to secure grant funding for analytical modeling that is not available in state government. Universities can also provide a neutral forum to engage stakeholders. Faculty at the Appalachian State University spearheaded the development of the North Carolina Energy Plan; similarly, the Florida Solar Energy Center at the University of Central Florida played a major role in Florida's Energy Plan. The Center for Energy, Economic and Environmental Policy at Rutgers University serves as policy advisor and evaluator for the New Jersey Clean Energy Program and related planning efforts and as facilitator for the Clean Energy Council.
- *Utilities.* Utilities, including investor-owned, municipal, and cooperative utilities, provide technical expertise and are sources of customer information. Utilities sometimes provide input as stakeholders, and sometimes serve directly on a board or council (e.g., Delaware, North Carolina, and West Virginia). They also participate in regional power system planning processes. They are also involved in implementing and evaluating programs and policies.

- *ISOs and Regional Transmission Organizations (RTOs).* These entities initiate and lead regional transmission planning processes. They provide information and analysis of the regional power system, solicit input from market participants and state entities, and develop the regional plan. They are also involved in implementing and evaluating programs and policies.
- *Independent Power Producers, Independent Transmissions Owner, and Energy Suppliers.* One or more of these entities might be involved, depending on the issues being addressed by the energy plan. They can provide information and analysis, particularly as it relates to one of their assets (e.g., a generating source, transmission line, or pipeline). They are also involved in implementing and evaluating programs and policies.
- *Environmental and Consumer Organizations.* These organizations often provide data and analysis, ideas on program design, and feedback on proposed policies, initiatives, goals, and programs.
- *Other Private Sector Entities.* Many energy plan components are geared to motivating greater investment by the private sector in energy efficiency and renewables. The private sector also plays a key role in spurring technological innovation. Large end users, manufacturers, energy efficiency providers, and other entities that are directly affected by state energy programs might be particularly helpful in developing and implementing an energy plan. Energy planning processes can also include representatives (including management and labor) of fuel, biomass, Energy Service Companies (ESCOs), or renewables industries.
- *The Public.* States involve the general public in the energy planning process by holding public hearings in different parts of the state and using the media and other information distribution outlets (e.g., agency Web sites and gubernatorial addresses) to raise awareness of pending issues. The public can provide feedback as well as new ideas and input to state officials.

Funding

Funding needs arise in both developing and implementing an energy plan. Developing a state energy plan can involve contributions of staff and other resources from multiple state agencies, the governor, the legislature, and sometimes private entities. Much of this support is typically in-kind because dedicated funding streams are rare. More common is a one-time appropriation. Development often calls for sophisticated energy system modeling, ideally coupled with economic and environmental analyses. This modeling can be costly to build and maintain, and funding is often a critical issue. A state may be able to fund this work through a utility gross receipts tax or other stable funding mechanism. For example, the New York State Energy Research and Development Authority (NYSERDA) is funded in part through a statutorily prescribed assessment on the intrastate sales of New York State's investor-owned electric and gas utilities.

Implementation of the plan, such as specific action items contained in the energy plan, could require special appropriations or mechanisms for funding (e.g., through a surcharge on electricity consumers or investment from the private sector such as for an RPS). For example, the plan could include recommendations for legislative action on financing renewable energy projects, energy tax credits, and other tax incentives or for allocating funding to data collection and research.

On a regional basis, if there is an RTO, the governing board may approve the use of a wholesale tariff to help support energy planning activities.

An energy plan can also direct investment by state agencies to meet specific purchasing targets for energy efficiency and renewables. For example, specific agencies can be charged with expanding cost/benefit analyses to include benefits of renewables and efficiency, allocating agencies' funds to particular types of projects, ensuring agency incentives are consistent with overall policy, or pursuing specific demonstration projects.

Planning Horizon

Planning horizons included in energy plans vary from a few years to 15 or 20 years. A state may choose to limit the time frame based on a concern about achieving the greatest accuracy. Other states extend the horizon so that they can consider how long-term needs might be met and to more fully realize the costs and benefits of different energy resources.

Timing and Duration

There is a great variety in the timing and duration of energy planning. Some states have a regular planning cycle (ranging from once every year to once every five years) that may include a provision for updating and/or evaluating the plan in off-years (e.g., Connecticut, California, Iowa, New York, Oregon). Other states develop energy plans on a more ad-hoc basis, based on the perceived need, resource constraints, or other factors. Some states have become recently active after waiting 10 or more years before revising their energy plan (e.g., Delaware, Wisconsin, North Carolina, Florida).

Interaction with Federal Policies

Several federal programs can help support the integration of clean energy into state and regional energy planning:

- **DOE.** DOE administers the State Energy Program, which provides grants to states and directs funding to state energy offices from DOE's technology programs. States use grants to address their energy priorities and program funding to deploy emerging clean energy technologies. As part of the State Energy Program, states are required to have an energy strategy in place that describes how they will use their annual appropriation to help promote energy efficiency and renewable energy. In addition, DOE has been working with the U.S. Environmental Protection Agency (EPA) to explore how to reflect clean energy in state air quality planning (e.g., through a number of Air Quality Energy Efficiency/Renewable Energy [EE/RE] Integration Pilots and other efforts).
- **EPA.** EPA supports energy planning efforts through technical assistance, analytical tools, and outreach support on a number of clean energy topics. Key programs include the Clean Energy-Environment State Partnership Program, Green Power Partnership, Combined Heat and Power Partnership, and ENERGY STAR program. Under the Clean Energy-Environment State Partnership Program, EPA helps partner states develop a *Clean Energy-Environment Action Plan*, which is a detailed, implementation-oriented strategy document aimed at identifying, assessing, and prioritizing energy policies, programs, and measures that can achieve cost-effective environmental benefits. This *Guide to Action* helps states with their assessment by providing information, data, case studies, and guidance on relevant tools and resources for 16 clean energy policies. Specific guidance on developing a state *Clean Energy-Environment Action Plan*, including related efforts to convene a state collaborative, are presented in Chapter 2, *Developing a Clean Energy-Environment Action Plan*.
- **FERC.** FERC requires RTOs, or ISOs, to be responsible for regional transmission planning. As part of this effort, FERC has enabled the creation of Regional State Committees for states to have input into regional transmission planning. FERC has taken steps toward working on facilitating transmission access for renewables, particularly wind. For example, it has held public technical conferences on assessing the state of wind energy in wholesale electricity markets. In addition, FERC is also supporting efforts to examine the role of distributed energy resources.
- **The Energy Policy Act of 2005 (EPAct 2005).** EPAct 2005 (Section 140) authorizes grants of \$5 million annually for each of fiscal years 2006 through 2010 for a pilot program for three to seven states with statewide plans for reducing electricity and natural gas consumption. The grants would be dependent on states proving independent verification of energy savings.

Interaction with State Policies

By its nature, state energy planning is often an umbrella function, providing an opportunity and mechanism to address multiple state policy objectives with participation from a full range of government and private entities. As such, it is the nexus for a variety of state policies. Many states have used

energy planning as a tool for addressing environmental policy objectives simultaneously with energy policy objectives. Indeed, it is when energy objectives are considered alongside environmental and economic development objectives that clean energy can take on a more prominent role in the energy plan.

Best Practices: Developing and Adopting an Energy Plan

The best practices identified below will help states develop an energy plan that incorporates clean energy and related environmental considerations. These best practices are based on the experiences of states across the country that have developed energy plans. (See Chapter 2, *Developing a Clean Energy-Environment Action Plan*, for more detail.)

- *Create a Collaborative.* Create an advisory group to identify and assess resources and tools developed by other organizations, including state agencies, legislatures, universities, and the private sector. This group can inform the establishment of a multi-agency, multi-stakeholder collaborative process to develop a plan. At the regional level, work with ISOs and RTOs to establish processes, set policy goals, and implement programs.
- *Establish Quantitative and Other Goals.* Identify policy objectives and specific goals, including areas for agency coordination as well as specific, quantitative clean energy goals, to help guide the work of the planning agency and provide the public and other stakeholders with expectations for the outcomes. Setting a quantitative goal may be tied to one or more of the analytical steps below.
- *Forecast Energy Demand.* Develop forecasts of energy demand that are based on end uses (i.e., using detailed information on energy-using appliances/equipment, including model, size, and operating characteristics) rather than econometric drivers (i.e., “top down” drivers such as population, economic activity, weather, and more general assumptions on appliance and equipment use/penetration).
- *Assess Clean Energy Potential.* Assess the technical, economic, and achievable potential for clean energy resources to help meet forecasted demand and integrate clean energy resources fully into the analysis.
- *Examine Policy Options.* Consider how new and existing policies and programs can help expand the use of cost-effective clean energy. The *Guide to Action* describes each of the 16 clean energy policies, programs, and strategies that states have found particularly promising and may include in their state or regional clean energy plans. States may develop several scenarios, based on a range of clean energy goals or policy variations. An important element of policy development is the equitable treatment of all energy resources in any recommendations/provisions for utility cost recovery decisions (i.e., avoid potential bias toward supply-side resources and transmission investments, and avoid policy recommendations that may inadvertently set a ceiling on clean energy investments). (See Section 6.2 for a broader discussion of utility regulations and incentives, and Sections 4.2 and 5.2 for information on public benefits funds [PBFs] for energy efficiency and energy supply, respectively.)
- *Evaluate Impacts of Policy Scenarios.* Develop forecasts of energy use that include a full range of impacts for each scenario (e.g., environmental, economic, system reliability, and price).
- *Link Plan to Action.* Develop steps for plan adoption and implementation, and make action items enforceable where appropriate. Identify specific action items and schedules for individual agencies, as well as for inter-agency coordination.
- *Coordinate Implementation.* Provide for coordination of program administration and delivery—including coordination with enacting bodies (e.g., the legislature or executive branch) and implementing agencies (e.g., Public Utility Commissions [PUCs], state energy offices).

Several states have identified economic development or climate change concerns as key drivers in the shaping of their energy plan (e.g., Connecticut, Florida, Illinois, New York, Oregon, West Virginia, Wisconsin, Iowa, North Carolina, Vermont). For example, the Massachusetts Climate Protection Plan is premised on the interrelated nature of energy, environment, housing, and transportation issues. Similarly, Connecticut cites its Climate Change Action Plan as one of the key factors affecting its energy policy. State climate change action plans often include a number of clean energy policies that can help achieve greenhouse gas reductions, such as energy efficiency goals or targets, renewable energy portfolio standards, building energy codes, and provisions to increase the use of clean distributed generation. Energy plans are frequently linked to economic development and job creation. Regulatory policies that address decoupling utility profits from energy sales, portfolio management, demand response, and utility planning are also related and are discussed in Section 6.1, *Portfolio Management Strategies*.

Some states have taken specific actions to ensure that utilities provide adequate access to transmission and distribution for renewables. Many utilities are determining how best to incorporate energy efficiency and distributed generation (DG) into distribution system planning. For example, New York has been evaluating DG in distribution system planning through several regulatory proceedings. Similarly, the Massachusetts DG Collaborative has a working group on DG distribution system planning.

Program Implementation and Evaluation

Roles and Responsibilities of Implementing Organizations

- **State Agencies.** Energy plans usually include specific actions for a number of state agencies including energy offices, public utility commissions (PUCs), environmental agencies, administrative agencies (or other agencies charged with purchasing), and economic development agencies. For example, PUCs

are often involved in developing efficiency plans and developing rules that specify actions regulated utilities must take to implement the policies and goals adopted in the plan. Agencies are key players in the implementation of specific programs and the review of plan implementation.

- **Legislature.** Legislative action may be required to implement certain steps of a plan, such as special tax treatment or development of funding sources. The legislature also often oversees the implementation of plans and may intervene to make course corrections or to clarify ambiguities.
- **Universities.** Universities often play a key role in energy research and development relating to clean energy options and are sometimes looked to as partners in initiatives to foster specific technologies.
- **Utilities.** Utilities (both vertically integrated and distribution-only) are essential to the implementation of certain programs, such as efficiency programs, integrating renewables into power systems, portfolio procurement, and IRP. They also participate in regional power system planning processes. Even utilities that are not regulated by the state, including municipal utilities and cooperatives, may have roles to play in program implementation.

Best Practices: Implementing Energy Plans

States can use the best practices below to implement their energy plan. These best practices are based on the experiences of states that have energy plans.

- Designate specific implementation tasks to specific agencies and staff.
- Create an entity or working group to monitor plan implementation.
- Link implementation to other policies so that state activities overall are compatible with the energy plan, including provisions that bind agencies to conduct certain activities, such as procuring certain resources or conducting key studies.
- Require each agency to develop a plan for implementing the portions of the plan for which it is responsible and to demonstrate that its activities support the goals of the plan.

Evaluation

Energy plan evaluation practices span a range of approaches from very broad review, to detailed program by program review and evaluation.

Some energy plans are primarily tools to enunciate policies and do not include a specific mechanism or procedure for reviewing and evaluating the implementation of the plan. In contrast, some plans include specific reporting requirements (e.g., to the legislature or the governor). Energy plans also can include feedback loops to guide future iterations of the plan. For example, in New York, the Energy Coordinating Working Group, comprising staff representatives of the agencies on the Energy Planning Board, issues an annual Report and Activities Update that evaluates progress toward the goals of the most recent energy plan. Similarly, Oregon's Biennial Energy Plan (2003–2005) includes a section on achievements, reviewing the results of the previous years' energy programs. Oregon's Renewable Energy Action Plan specifically charges a working group

with evaluating implementation of the plan. The 2005 Connecticut Energy Plan reviews the success in implementing the 2004 Energy Plan, and includes a section on evaluating and providing a progress report as part of the energy plan. The Iowa Department of Natural Resources (DNR) prepares a comprehensive energy plan update every two years, reporting on energy consumption as well as progress in improving energy efficiency and expanding renewable energy use.

A thorough and well-documented evaluation process can help build confidence in the benefits associated with clean energy. In addition, evaluation results can help planners understand instances where projections did not materialize as expected and point to ways to address potential barriers to full policy success.

State and Regional Examples

California

As directed by the state legislature in 2002, the California Energy Commission (CEC) prepares a biennial Integrated Energy Policy Report (IEPR). The IEPR addresses issues uncovered in an integrated assessment of major energy trends and challenges facing California's electricity, natural gas, and transportation fuel sectors. It makes policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy resources; enhance the state's economy; and protect public health and safety. This includes recommendations to further the goals included in the state's EAP, described in the next paragraph. The IEPR includes a chapter dedicated to the issue of climate change and the related interactions with energy.

The EAP is a brief blueprint developed by the CEC, along with the California Public Utilities Commission (CPUC), as a "living document" to guide energy related actions throughout the state. The goal of the EAP is to ensure that energy is available and affordable, with minimal environmental risks and impacts, when and where it is needed. Other participants involved in preparing the EAP include the State Business,

Best Practices: Evaluating Energy Plans

The best practices identified below will help states evaluate their energy plans. These best practices are based on the experiences of states that have an energy plan.

- Identify a specific schedule and steps for plan evaluation.
- Designate an entity or working group responsible for monitoring plan implementation.
- Develop a process for evaluating individual action items and success in achieving the stated objective.
- Select appropriate measures to determine the success of programs (e.g., metrics can include kWh saved, appliances sold, dollars spent, and new renewables installed) and include metrics about environmental and economic benefits and results, such as emissions saved or jobs created.
- Prepare a comprehensive report that examines all aspects of the energy plan as a whole.
- Recommend adjustments to respond to new opportunities or barriers identified in the evaluation process.

Transportation, and Housing Agency; the Resources Agency; the State and Consumer Services Agency; the California Independent System Operator (CAISO); the California Environmental Protection Agency (Cal EPA); and other agencies with energy-related responsibilities.

The EAP II: Implementation Roadmap for Energy Policies, released in 2005, notes that California's energy efficiency efforts, particularly efficiency requirements for appliances and new buildings, have already reduced peak capacity needs by more than 12,000 MW and continue to save about 40,000 gigawatt-hours (GWh) of electricity annually. It adds that in 2004, the CPUC adopted further energy savings goals for electricity and natural gas. In meeting these targets, investor-owned utilities (IOUs) will save an additional 5,000 MW and 23,000 GWh per year of electricity and 450 million therms per year of natural gas by 2013. The EAP II asserts that there is more to be done and lays out a series of key actions in the areas of energy efficiency, demand response, electricity adequacy, electricity market structure, and other areas.

The original EAP, released in 2003, identifies a "loading order" for energy resources that requires (1) optimizing all strategies in conservation and energy efficiency to minimize demand increase, (2) meeting new generation needs first by renewable energy and distributed generation, and (3) supporting clean fossil fuel-fired central station generation. This loading order has since been codified in state legislation and extends the application to local publicly owned (i.e., municipal) utilities.

Web site:

<http://www.energy.ca.gov/energypolicy/index.html>

Connecticut

The Connecticut Legislature reconstituted the Connecticut Energy Advisory Board in 2003. The Board includes leaders from multiple state agencies who identify and coordinate state energy needs and recommend strategies and solutions. The Board provides an Annual Energy Plan to the legislature that includes specific strategies to support energy efficiency and renewable resources. The Board's 2004 Plan included a detailed assessment of energy supply and demand options and an overview of related policy

opportunities and challenges. It also presented 10 energy-related strategies (and related examples of possible actions) including: continuing to support energy efficiency and conservation, supporting renewable energy technologies, supporting demand response, and supporting transportation and land use policies that reduce energy use and increase fuel diversity.

The 2005 plan reiterates the importance of those strategies and identifies several related goals including: (1) initiating and implementing by year-end 2005 a statewide public education and awareness program about the Board's recommended strategies to reduce dependence on fossil fuels, and (2) initiating legislative efforts related to the strategies identified in 2004. The 2005 plan also reported on the progress of the governor's Steering Committee (GSC) on Climate Change and the related Connecticut Climate Change Stakeholder Dialogue as a significant energy-related activity. It noted the governor's adoption of 38 recommendations made by the stakeholder group, including implementing measures to create a voluntary clean energy "choice" program for Connecticut electricity users, developing new emissions standards for cars, and using energy-efficient materials and design concepts in the construction of new state buildings.

Web site:

http://www.cerc.com/pdfs/ceabenergyplan_final05.pdf

New Mexico

The governor of New Mexico articulated a goal for New Mexico to become a leader in renewable energy and clean energy technologies. The state is also pursuing economic development goals through development of clean energy. Executive Order 2004-019 declared New Mexico the "Clean Energy State" and established an internal Clean Energy Development Council (CEDC) consisting of cabinet secretaries. The CEDC established task forces on concentrating solar power, electricity transmission, biomass, distributed solar, utility energy efficiency, and green building.

Web site:

<http://www.emnrd.state.nm.us/ecmd/>

New York

The New York State Energy Planning Board was created by the legislature to oversee the development and adoption of the Annual State Energy Plan. The Energy Planning Board comprises several agencies: NYSERDA, the New York State Department of Transportation (DOT), the New York State Public Service Commission (PSC), the New York State Department of Economic Development (DED), and the New York State Department of Environmental Conservation (DEC). While legislation creating the Energy Planning Board has expired, there are draft bills in both houses of the legislature to reauthorize it.

The Energy Plan includes specific goals for the contribution of energy efficiency and renewables. The 2002 Energy Plan included the following goals: (1) reduce primary energy use per unit of gross state product to 25% below 1990 levels by 2010, (2) increase renewable energy use as a percentage of primary energy use by half from 2002 levels to 15% by 2020, and (3) reduce greenhouse gas emissions 5% below 1990 levels by 2010 and 10% below 1990 levels by 2020.

An annual report provides updates documenting progress in implementing policies and recommendations contained in the plan. This report provides an update to the Energy Planning Board on actions and initiatives the state has taken to implement the strategies and recommendations in the Energy Plan. It also summarizes the data and information filed with the board by major energy suppliers in 2004, under regulations promulgated by the board. An appendix to the report contains an extensive matrix that catalogs specific initiatives and programs undertaken in response to strategies in the 2002 plan. Policy objectives for the Energy Plan include increasing energy diversity (including energy efficiency and renewables) and promoting and achieving a cleaner and healthier environment. NYSERDA conducts comprehensive tracking of energy plan implementation, including specific actions by the government and private sectors.

Web site:

http://www.dps.state.ny.us/State_Energy_Plan.html

Oregon

Under the leadership of its governor, Oregon has developed a Renewable EAP (issued April 2005). The goals of the plan are to encourage and accelerate renewable resources, stimulate economic development (particularly in rural areas), and improve the environmental future of the state. The plan is intended to be central to progress on the governor's initiatives on sustainability and global warming.

The plan establishes long-term and short-term goals. The long-term goals include: (1) new post-1999 renewables account for 10% of load by 2015—a growth rate of about 1% per year, and (2) 25% of state government electricity needs will be met using renewables by 2010, and 100% of electricity needs will be met with renewables by 2025. The short-term goals, to be achieved by 2006, include: (1) developing 300 new wind energy resources, (2) finding and implementing five solutions to transmission bottlenecks to provide access to load centers for renewables and other resources, (3) implementing specific targets for solar photovoltaic (PV), biomass, biogas, efficient CHP, fuel cells, and environmentally sound hydro, (4) ensuring that utilities offer stable price renewable products, (5) conducting a feasibility study of an RPS, and (6) meeting state government purchasing goals and others.

The plan includes specific action items for the following entities in the state: Governor's Office, Renewable Energy Working Group, Department of Energy, Economic and Community Development Department, Department of Administrative Services, Public Utility Commission, Department of Agriculture, Department of State Lands, Department of Consumer and Business Services' Building Codes Division, Oregon University System and Community Colleges, and Oregon Solutions team. The Renewable Energy Working Group is specifically charged with guiding plan implementation.

Web site:

<http://egov.oregon.gov/ENERGY/RENEW/docs/FinalREAP.pdf>

New England Governors' Conference (NEGC)

Governors of the six-state New England region, an informal alliance since colonial days, formally established the NEGC in 1937. The conference's goal is to promote New England's economic development. In 1981, the conference incorporated as a nonpartisan, nonprofit, tax-exempt 501(c)(3) corporation. The region's six governors serve as its board of directors. The NEGC coordinates regional policy programs in the areas of economic development, transportation, environment, energy, and health, among others. Through these efforts, the conference seeks to effectively and cost-efficiently coordinate regional policies that reflect and benefit the states.

In 2001, the NEGC and the Eastern Canadian Premiers announced a Climate Change Action Plan. This plan contains short-term, medium-term, and long-term goals for reducing greenhouse gases and includes several specific measures to promote clean energy. The short-term goal is to reduce greenhouse gas emissions to 1990 levels by 2010; the medium-term goal is to reduce emissions 10% below 1990 levels by 2020; and the long-term goal is to reduce emissions by 75 to 85% below 2001 levels. To achieve these broad objectives, the plan includes goals to reduce greenhouse gas emissions from the electricity sector through clean energy options: (1) by 2025, to reduce carbon dioxide (CO₂) emissions per kilowatt-hour (kWh) of electricity by 20% from current emissions through a combination of renewable energy sources, lower carbon fuel, energy efficiency, and efficient DG, and (2) by 2025, to increase the amount of energy saved by 20% from current levels.

Web site:

<http://www.negc.org/documents/NEG-ECP%20CCAP.PDF>

Northwest Power and Conservation Council

Created by Congress in 1980 to coordinate the federal power system in the Northwest, the Northwest Power and Conservation Council includes two representatives from each of the four states of Idaho, Montana, Oregon, and Washington. The council develops a 20-year electric power plan for reliable energy at the lowest economic and environmental cost. The energy plan gives highest priority to cost-effective conservation, followed by renewable resources, to the extent they are cost-effective. The current plan includes specific targets and action items for conservation, demand response, and wind resources. The target for conservation is 700 average megawatt (MW) between 2005 and 2009, and 2,500 average MW over the 20-year planning horizon. (An average MW is the amount of energy delivered or saved over a year's time.) The plan also calls for over 1,100 MW of wind from system benefits charge (SBC) programs and utility integrated resource plans.

The Northwest Power and Conservation Council has created a Regional Technical Forum to develop standards to verify and evaluate energy conservation savings for system planning purposes, and assess how energy efficiency is increasingly being used as a hedging strategy to reduce risks associated with volatile electricity prices.

Web site:

<http://www.nwccouncil.org/energy/powerplan/plan/Default.htm>

Western Governors' Association (WGA)

The governors of the 18 states in WGA created the Clean and Diversified Energy Advisory Committee (CDEAC) in 2004 to oversee the work of the following eight task forces associated with the Clean and Diversified Energy Initiative:

- Advanced Natural Gas
[http://www.westgov.org/wga/initiatives/cdeac/Advanced Coal-full.pdf](http://www.westgov.org/wga/initiatives/cdeac/Advanced%20Coal-full.pdf)
- Biomass
<http://www.westgov.org/wga/initiatives/cdeac/biomass.htm>
- Clean Coal
<http://www.westgov.org/wga/initiatives/cdeac/coal.htm>
- Energy Efficiency
<http://www.westgov.org/wga/initiatives/cdeac/Energy%20Efficiency.htm>
- Geothermal
<http://www.westgov.org/wga/initiatives/cdeac/geothermal.htm>
- Solar
<http://www.westgov.org/wga/initiatives/cdeac/solar.htm>
- Transmission
<http://www.westgov.org/wga/initiatives/cdeac/transmission.htm>
- Wind
<http://www.westgov.org/wga/initiatives/cdeac/wind.htm>

The governors are examining the feasibility of actions that would be needed to develop 30,000 MW of clean energy in the West by 2015, ensure adequate transmission capacity, and increase energy efficiency 20% by 2020. The Energy Efficiency Task Force of the CDEAC recently released an analysis of the potential for improving energy efficiency in the 18-state WGA region; a review of barriers inhibiting greater investment in energy efficiency; and recommendations for how the region can increase energy efficiency through policy actions such as state appliance standards, building codes, enhanced electricity

and natural gas DSM, utility pricing/rate structure adjustments, public sector initiatives, and education and outreach. The analysis found that a combination of current state and utility energy efficiency policies and programs and widespread adoption of best practice policies and programs would achieve the WGA's goal of reducing electricity consumption in 2020 by 20%. The absolute electricity savings projected by 2020 are equivalent to the electricity supply of 100 baseload power plants.

Web site:

<http://www.westgov.org/wga/initiatives/cdeac/>

Western Interstate Energy Board (WIEB)

The WIEB is an organization of 12 western states and three Canadian provinces that operate under the auspices of WGA. WIEB conducts a broad menu of clean energy activities, including (1) helping develop a western renewable energy tracking system (Western Renewable Energy Generation Information System or WREGIS), (2) helping foster policies to enable wind energy siting and operation, and (3) developing transmission protocols that incorporate clean energy options.

Web site:

<http://www.westgov.org/wieb/>

What States Can Do

States and regions have approached clean energy planning in a number of ways, including as part of a broad, multi-faceted strategy that incorporates clean energy as one element of a larger energy plan, as a targeted effort, and as an exclusive focal point. Clean energy planning has also involved variations of these three approaches, including government-focused lead by example strategies. The information in this guide describes best practices for design, implementation, and evaluation; summarizes a wide range of state experiences with energy planning; and offers a variety of information resources on energy planning strategies. Based on these state examples, action steps for states that want to establish their own energy

planning programs or strengthen and expand existing programs are described in the following section.

Action Steps for States

States interested in state or regional energy planning can take the following steps:

- *Create a Collaborative.* Identify and assess resources and tools developed by other organizations, including state agencies, legislatures, universities, and the private sector. This group can inform the establishment of a multi-agency, multi-stakeholder collaborative process to develop a plan. At the regional level, work with ISOs and RTOs to establish processes, set policy goals, and implement programs.
- *Identify Policy Objectives and Specific Goals.* These goals and objectives can include areas for agency coordination as well as specific, quantitative clean energy goals, to help guide the work of the planning agency and provide the public and other stakeholders with expectations for the outcomes.
- *Analyze and Evaluate Opportunities to Incorporate Clean Energy Within State and Regional Energy Plans.* Develop forecasts of energy demand that are based on end-uses (i.e., using detailed information on energy-using appliances/equipment, including model, size, and operating characteristics), assess the technical, economic, and achievable potential for clean energy resources to help meet forecasted demand and integrate clean energy resources fully into the analysis, and consider how new and existing policies and programs can help expand the use of cost-effective clean energy. Integrate environmental and economic, as well as energy, benefits into the analysis to help further support the use of clean energy.
- *Link Plan to Action and Coordinate Implementation Across Agencies.* Develop steps for plan adoption and implementation and make action items enforceable where appropriate. Identify specific action items and schedules for individual agencies, as well as for inter-agency coordination. Provide for coordination of program administration and delivery—including coordination with enacting bodies (e.g., the legislature or executive branch) and implementing agencies (e.g., PUCs, state energy offices).

Information Resources

Information About State and Regional Plans

The following are links to individual state energy (or related) plans or planning processes. The list covers many states, but it might not contain a link to every energy plan or process available.

State	Title	URL Address
Alaska	Rural Energy Plan	http://www.akenergyauthority.org/publicationAREP.html
Arizona	Arizona Energy Infrastructure 2002	http://www.azcommerce.com/pdf/prop/sesreports/energy.pdf
California	Integrated Energy Policy Reports	http://www.energy.ca.gov/energypolicy/index.html
	EAPs	http://www.energy.ca.gov/energy_action_plan/index.html
Connecticut	Energy Plan for Connecticut	http://www.cerc.com/pdfs/ceabenergyplan_final05.pdf
Delaware	Executive Order	http://www.state.de.us/governor/orders/webexecorder31.shtml
Florida	Florida's Energy Future: Opportunities for Our Economy, Environment and Security	http://www.dep.state.fl.us/energy/pdf/fl_energy_future04.pdf
Hawaii	Hawaii Energy Strategy 2000	http://www.hawaii.gov/dbedt/ert/hes2000sum/index.html
Illinois	Sustainable Energy Plan	http://www.icc.state.il.us/ec/ecEnergy.aspx
Iowa	Iowa Energy Plan	http://www.state.ia.us/dnr/energy/MAIN/PUBS/CEP/
Kansas	2004 Kansas Energy Plan	http://www.kansasenergy.org/sercc_energyplan_2004.htm
Kentucky	Kentucky's Energy Opportunities for Our Future: A Comprehensive Energy Strategy	http://www.energy.ky.gov/energyplan/
Maine	Energy Resources Council: 2005 Work Plan and Report to the Legislature	http://www.maineenergyinfo.com/docs/erc2005workplan.pdf
Massachusetts	Climate Protection Plan	http://www.mass.gov/oed/climate.html
Michigan	Nonprofit energy corporation to advance alternative energy technology	http://www.nextenergy.org/
Missouri	Integrated Strategic Plan	http://www.dnr.mo.gov/energy/strategicplan.htm
Montana	Montana Vision 2020	http://www.cte.umt.edu/MTFutures/mv2020.doc

State	Title	URL Address
Nevada	State of Nevada Energy Conservation Plan	Energy in state office buildings: http://dem.state.nv.us/necp2.pdf
	2003 Status of Energy in Nevada	Status of Energy in Nevada: http://energy.state.nv.us/2003%20Report/2003%20Report.htm
New Hampshire	New Hampshire's 10 Year State Energy Plan	http://www.nh.gov/oep/programs/energy/StateEnergyPlan.htm
New Jersey	An Energy Plan for the 21st Century	http://www.bpu.state.nj.us/governor/smartGrid.shtml
	New Jersey's Clean Energy Program: 2003 Annual Report	http://www.njcleanenergy.com/media/2003_NJCEP_Annual_Report.pdf
New Mexico	Governor's policy priorities	http://www.governor.state.nm.us/priorities-energy.php?mm=4
New York	New York State Energy Plan—June 2002	http://www.nyserda.org/Energy_Information/energy_state_plan.asp
North Carolina	North Carolina State Energy Plan 2003	http://www.energync.net/sep/docs/sep03.pdf
Oklahoma	Oklahoma's Energy Future: A Strategy for the Next Quarter Century	http://www.iogcc.oklaosf.state.ok.us/MISCFILE/oklahomaenergystrategy.pdf
Oregon	Renewable Energy Action Plan	http://egov.oregon.gov/ENERGY/RENEW/RenewPlan.shtml
	State of Oregon Energy Plan 2005–2007	http://egov.oregon.gov/ENERGY/docs/EnergyPlan05.pdf
South Carolina	South Carolina Energy Office, Strategic EAP 2002–2003	http://www.state.sc.us/energy/PDFs/strategic_plan_02_03.pdf
South Dakota	Statewide Energy Management, but no clean energy development plan.	http://www.state.sd.us/boa/EnergyMgt.htm
Tennessee	Report of Governor's Interagency Policy Workgroup	http://www.state.tn.us/ecd/pdf/energy/energy_policy.pdf
Texas	Energy Planning Council	http://www.rrc.state.tx.us/tepc/
Utah	State Energy Program Plan	http://www.energy.utah.gov/sep/sep.htm
Vermont	Comprehensive Energy Plan	http://publicservice.vermont.gov/pub/state-plans-compenergy.html
Virginia	The Virginia Energy Plan, December 2001	http://www.mme.state.va.us/de/chap2b.html
Washington	2005 Biennial Energy Report	http://www.cted.wa.gov/_CTED/documents/ID_1872_Publications.pdf
West Virginia	West Virginia's Energy Roadmap, 2001–2020	http://www.wvenergyroadmapworkshops.org/reports/WestVirginiaEnergyRoadmap08-20-02.pdf

State	Title	URL Address
Wisconsin	State of Wisconsin 2001 Energy Policy	http://www.wtpeople.com/energy/energypolicy062101.pdf
	Report of the Governor's Task Force on Energy Efficiency and Renewables	http://energytaskforce.wi.gov/section.asp?linkid=33
Regional Planning Organizations or Efforts	New England Governor's Conference (NEGC's) Climate Change Action Plan	http://www.negc.org/documents/NEG-ECP%20CCAP.PDF
	Northwest Power and Conservation Council	http://www.nwcouncil.org/
	Northwest Power and Conservation Council Regional Technical Forum	http://www.nwcouncil.org/energy/rtf/about.htm
	WGA Clean and Diversified Energy Initiative	http://www.westgov.org/wga/initiatives/cdeac/
	Western Interstate Energy Board (WIEB)	http://www.westgov.org/wieb/

General Articles About State and Regional Energy Planning

Title/Description	URL Address
Plugging in Renewable Energy, Grading the States. Union of Concerned Scientists. May 2003. This report evaluates the progress of individual states in renewable energy.	http://www.ucsusa.org/clean_energy/clean_energy_policies/plugging-in-renewable-energy-grading-the-states.html
Powerful Solutions: Seven Ways to Switch America to Renewable Energy, as well as State Supplements, Union of Concerned Scientists. January 1999.	http://www.ucsusa.org/clean_energy/clean_energy_policies/powerful-solutions-7-ways-to-switch-america-to-renewable-electricity.html
Powering the South: A Clean and Affordable Energy Plan for the Southern United States. Renewable Energy Policy Project. January 2002.	http://www.poweringthesouth.org/report/
Repowering the Midwest: The Clean Energy Development Plan for the Heartland. Environmental Law and Policy Center et al., 2001.	http://www.repowermidwest.org
Transmission Planning and Wind Energy. National Wind Coordinating Committee. August 2004.	http://www.nationalwind.org/publications/transmission/transbriefs/Planning.pdfs

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Title/Description	URL Address
CERCDC. 2003. EAP. California Energy Resources Conservation and Development Commission (CERCDC), CPUC.	http://www.energy.ca.gov/energy_action_plan/
Pacific Northwest Electric Power Planning and Conservation Act. 1980. 839b(e)(1). 16 United States Code Chapter 12H (1994 & Supp. I 1995). Act of December 5, 1980, 94 Stat. 2697. Public Law No. 96-501, S. 885.	http://www.nwppc.org/library/poweract/poweract.pdf